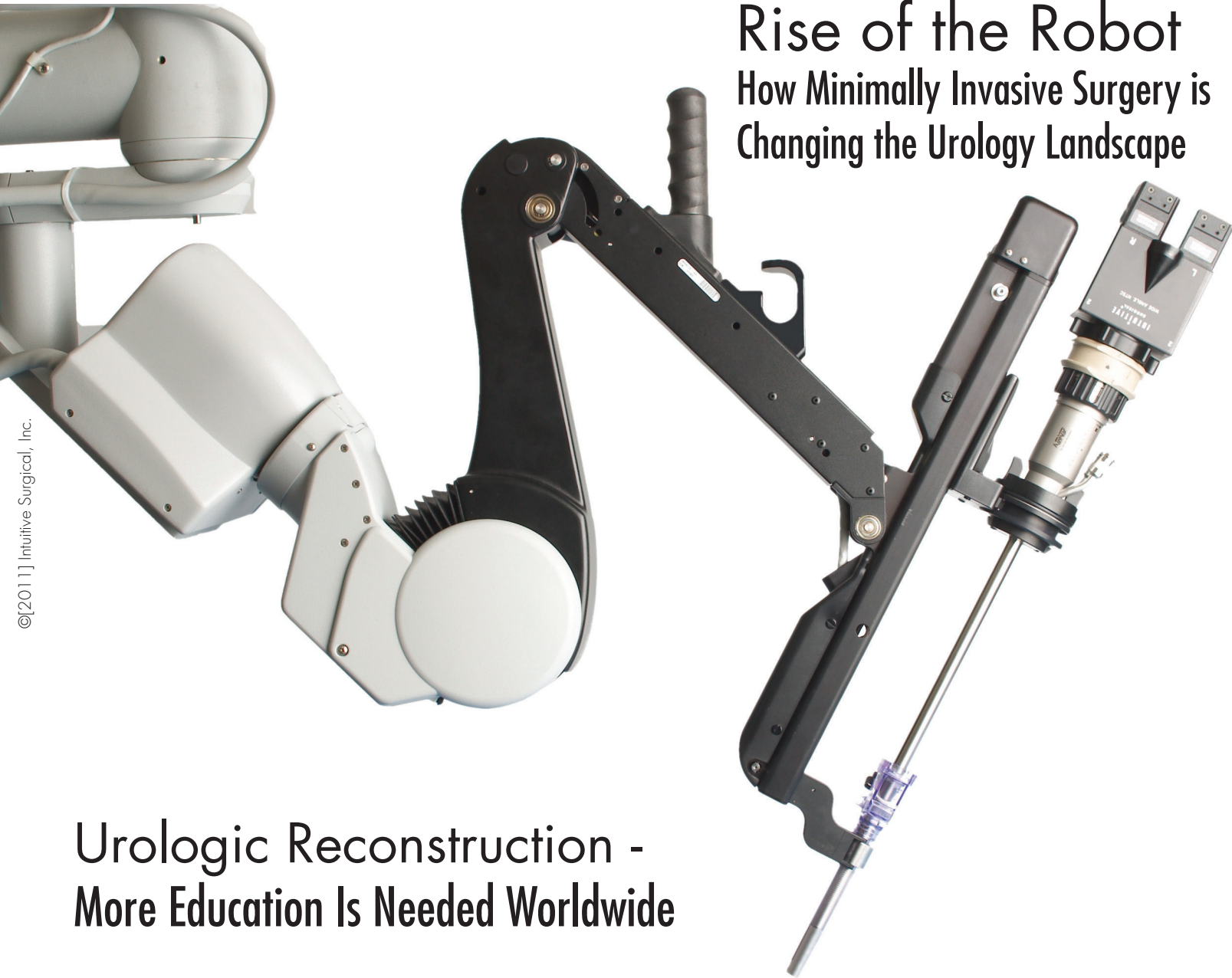


GLOBAL CONNECTIONS

A publication of the American Urological Association

Volume 2

Rise of the Robot How Minimally Invasive Surgery is Changing the Urology Landscape



Urologic Reconstruction - More Education Is Needed Worldwide



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Contents

4

Rise of the Robot
How Minimally Invasive Surgery is
Changing the Urology Landscape

10

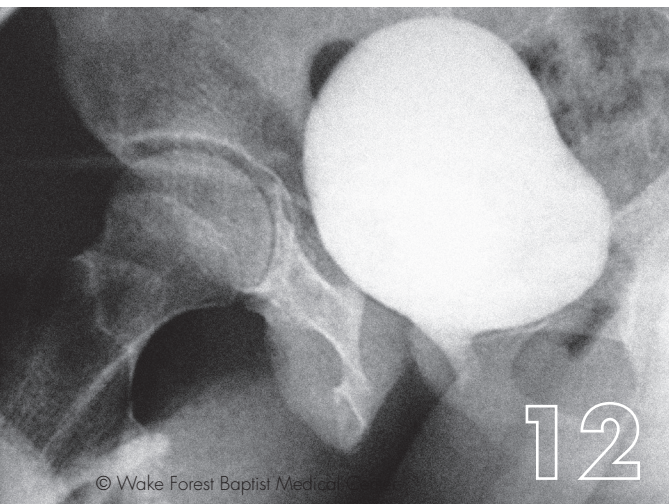
EXCHANGES:
Up Close & Personal -
AUA's Male Circumcision Volunteer Program

12

Urologic Reconstruction - More
Education Is Needed Worldwide

15

COLLABORATIONS:
Educational Bridge with China



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RISE OF THE R



ROBOT

HOW MINIMALLY
INVASIVE SURGERY
IS CHANGING THE
UROLOGY LANDSCAPE

By Ashtosh Tewari, MD,
and Wendy Waldsachs Isett

It's a standard operating room scene, with a twist. A patient, surrounded by nurses, anesthesiologists and other members of the care team, lay in a supine position, fixed to the bed and placed in Trendelenburg's position, legs apart. A patient side cart, with four mechanical arms, each with instruments attached, is docked into place above. The lead surgeon is not standing at the table with the team; instead, he is away from the table at a console nearby, his hands and feet ready to maneuver the joysticks and pedals that will operate the robot and perform what we know as a *robotic-assisted laparoscopic prostatectomy*.

For some, it may seem like a scene from a science fiction novel, but for thousands of surgeons and patients around the world, it represents the changing face of surgery. The minimally invasive revolution is upon us, and the robot is leading the way.

REVOLUTIONARY RESEARCH

The history of urology is filled with any number of revolutions, from the invention of new devices to the advancement of technologies to refine procedures and dramatically enhance patient care.

Robotic surgery began its rise in the mid 1980s and early 1990s. Early surgical robots included the PUMA 560, which was used in a neurosurgical biopsy; the PROBOT, developed at Imperial College London to perform prostatic resections; and the ROBODOC, developed by Integrated Surgical Systems to assist in hip replacement surgeries. The first robot-assisted procedure, a cholecystectomy, was performed in 1987.

The bulk of medical robotics research, however, grew out of two separate government-funded research initiatives, one through the Small Business Innovation Research (SBIR) program of the National Aeronautics and Space Administration (NASA), and the other supported by the National Institutes of Health (NIH) and the Defense Advanced Research Projects Agency (DARPA).

CONTINUED ON PAGE 7 ▼

Together WE ARE UROLOGY



Supporting Residency Programs Worldwide

The American Urological Association (AUA) has a long history of working with urology residency programs across the United States to provide their residents with programs, resources and products to enhance their education. In 2007, the AUA proudly announced the creation of an International Residents-in-Training (IRIT) membership category to provide these same valuable benefits to international residents at a greatly reduced rate. In support of this expansion, the AUA implemented an International Residency Grant Program to benefit both residents and residency programs in countries outside the United States, Canada and Mexico.

The International Residency Grant Program encourages international urological residency programs to support AUA membership and, in turn, have a chance to earn grant money for their program. To participate in the Grant Program, your program must be an approved urological residency program. All new residency programs must complete and submit the online enrollment form by **January 27, 2012**. The online enrollment form can be found at www.AUAnet.org/IRITGrant. The AUA will contact all other programs that we currently have on file regarding their interest in participating in this program. Once enrolled, the residency program must have two or more of its current non-member residents complete the application for International Residents-in-Training membership by **March 2, 2012**. For each resident that completes a membership application, that program will be entered into the drawing. Two winners will be randomly selected from this group to receive a grant of \$200

(USD) each, which is to be used to directly support residents in their programs. Furthermore, participating programs will have their names publicized during the AUA Annual Meeting and in *AUA News*.

Being a part of the AUA as an International Residents-in-Training member advances knowledge and skill level through education, training and global networking opportunities. Specific benefits include a discounted Annual Meeting registration fee and access to the Urology Core Curriculum, an online educational resource linking to current and scientific resources worldwide. Members also receive a free subscription to *The Journal of Urology* and other AUA publications.

In 2011, more than 80 international residency programs participated in the grant program. Instituto de Previdencia dos Servidores de Estado de Minas Gerais from Brazil and 1st University Urological Department-Residency in Urology from Greece were the two recipients of the grant monies. We encourage residents and their programs to take advantage of this unique opportunity to get involved with the AUA today. If you would like to find out more about the International Residency Grant Program, please visit the AUA Web site at www.AUAnet.org/IRITGrant. If you are a Program Director and would like to be added to our mailing list to receive announcements regarding deadlines and application information, please contact the AUA at membership@auanet.org.

“WHAT THE INTRODUCTION OF ROBOTICS HAS DONE IS DRAMATICALLY FINE-TUNE LAPAROSCOPY...IT'S A NATURAL STEP FORWARD.”

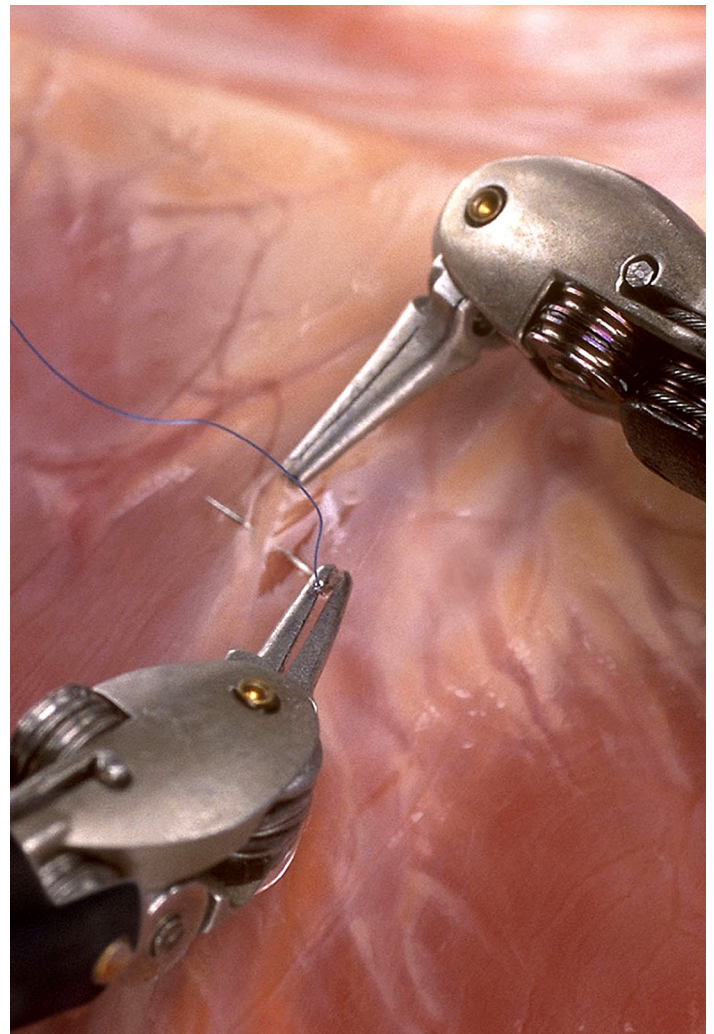
NASA looked to Computer Motion Inc. to develop technology to power a robotic arm to service satellites and conduct payload inspections on shuttles. The desire by the space program for robotics that could function beyond human dexterity led to the development of the Automated Endoscopic System for Optimal Positioning (AESOP) by Computer Motion Inc. AESOP technology was a natural addition to the standard endoscopic and laparoscopic techniques that had become standard in surgical settings, essentially giving surgeons a third arm. The robotic arm held the endoscopic camera, allowing for a steadier view than a human-held camera with more precise and consistent movements. AESOP functioned by voice command, giving the lead surgeon control and freeing up other operating room staff. The AESOP system was approved by the U.S. Food and Drug Administration (FDA) in 1990. It was the first device of its kind to receive FDA approval. Computer Motion went on to develop the ZEUS Robotic Surgical System, the second generation of the AESOP technology.

SRI International, a nonprofit research institute, developed the technology behind the da Vinci system in the early 1990s. Working on the NIH and DARPA charge to engineer a battlefield robot that could be operated remotely by physicians positioned out of harm's way, SRI developed the prototypes of what we now know as da Vinci. Intuitive Surgical, Inc. was incorporated to bring the new technology to market and, in 2000, the da Vinci system became the first robotic system to be approved by the FDA in the United States. Approval for ZEUS followed in 2001. Both were actively marketed in Europe before being approved in the United States.

Intuitive Surgical and Computer Motion merged in 2003, and the ZEUS system was phased out. According to Intuitive, there are currently more than 1,900 da Vinci systems installed in more than 1,500 hospitals worldwide.

THROUGH THE KEYHOLE

Laparoscopy – the earliest form of minimally invasive surgery – can be traced back to as early as the turn of the century to Georg Kelling of Saxony, who performed the first laparoscopic “keyhole” procedure on a dog. Gastroenterologists and gynecologists were some of the earliest specialists to adopt the



technology, with urologists following in the 1970s and 1980s. Laparoscopy brought with it a number of benefits, including less blood loss and a decrease in surgical complications. According to AUA Historian Rainer M.E. Engel, the addition of robotics to laparoscopy has enhanced those benefits.

“What the introduction of robotics has done is dramatically fine-tune laparoscopy,” he says. “It’s a natural step forward.”

Patients are also embracing the technology. According to Drs. Reinhard Peschel, a urologist in Innsbruck, Austria, and Gerald Tan, of Tan Tock Seng Hospital in Singapore, it is the patients that are driving the use of robotics.

In Singapore, a robotic approach is now applied to prostatectomy, cystectomy and partial nephrectomy.

“Many patients in Singapore are now better informed via the internet and are choosing robotic surgery for their urologic cancers,” Dr. Tan said. “Our patients have almost all opted for the robotic approach to their urologic conditions, despite the significantly higher costs of surgery.”

"As robotic surgery is not that widespread in Austria as in the States, people have to travel to get robotic surgery – and they do, which is totally uncommon for Austrian patients," Dr. Peschel said.

These sentiments are echoed by Dr. Stephen Nakada of the University of Wisconsin, Madison, in the United States.

"Patients are driving the rise of robotics and want the robot whenever possible," Dr. Nakada said. "I don't know patients who don't want the robot."

"Patients are going to pick the least invasive approach, if it's possible."

ROBOTS AND RESIDENTS

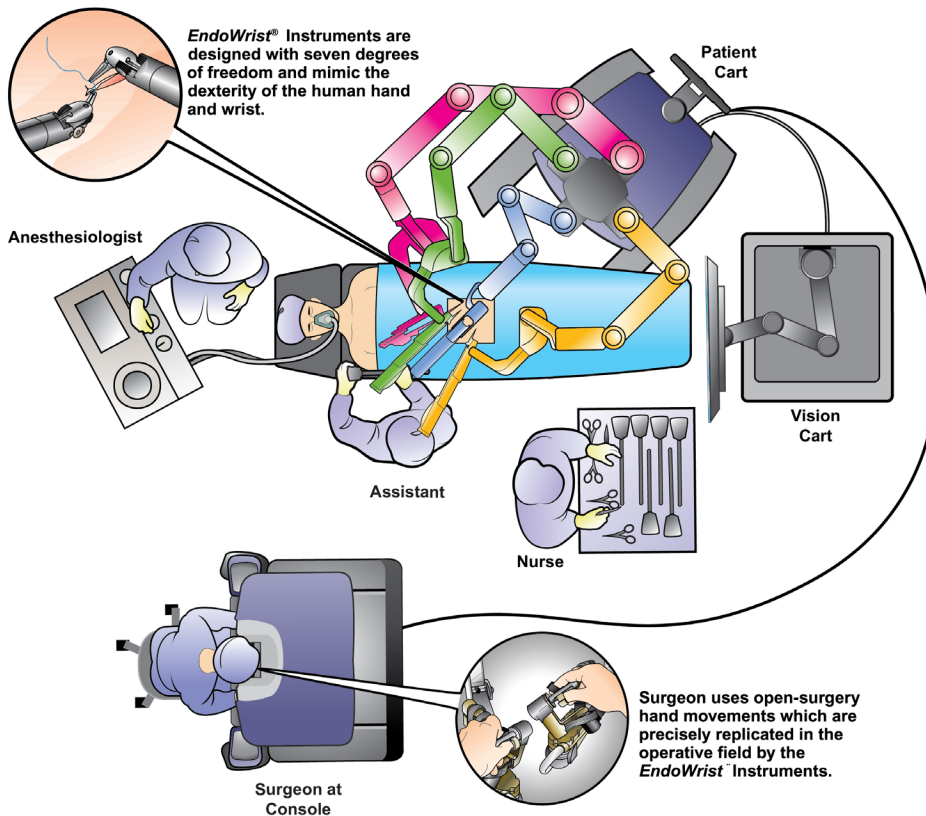
Most of today's residents have extensive experience playing computer games, which some say may help them ultimately become better surgeons. Studies have shown that video gamers show superior hand-eye coordination, faster reaction times, superior spatial visualization skills and an increased capacity for visual attention and spatial distribution – skills that lend themselves greatly to laparoscopy and suturing. A 2003 study at

Beth Israel Medical Center in New York examined the skills of 33 surgeons (21 residents and 12 attending physicians) using the "Top Gun" laparoscopic skills and suturing program. It found that current video gamers scored 40 percent better overall in suturing, and those with video game experience were 33 percent better at laparoscopic drills and suturing. Additionally, results showed that subjects who played video games for more than three hours per week had 37 percent fewer errors than those who had never played video games. This group was also 27 percent faster at laparoscopic drills and suturing tasks.

"Certainly the generation that is comfortable working off a video screen has benefitted by all technology," Dr. Nakada says. "We have been performing surgery on a TV screen – endoscopy, laparoscopy and robotic surgery – for quite some time. Virtually all urology is done off a screen."

"Robotics did not change urologic care; it is just another technique," Dr. Peschel says.

The da Vinci robot operates on a master-slave system, scaling down the surgeon's natural movements and minimizing tremors, essentially allowing him or her to make steady open surgery moves in a minimally invasive environment – something that is not always feasible during a traditional laparoscopy.



“WHAT YOU CUT IS THE SAME, WHERE YOU CUT IS THE SAME. WHAT IS DIFFERENT IS HOW YOU CUT.”

“What robotic surgery does is raise the level of detailed surgeries that you can do with minimally invasive, assisted laparoscopic techniques,” says Dr. Nakada. “Robotic surgery allows for fine suturing and detailed surgical work, and allows urologists to do virtually every open operation in a minimally invasive fashion.

“It empowers more surgeons to perform these minimally invasive procedures.”

But, while it is true that the robot adds a valuable new tool to the surgeon’s toolbox, experts caution that robotics skill does not replace a need to learn open techniques, should a need to convert arise.

“There is no substitute for good, solid surgical skills,” Dr. Engel says. “[In robotic surgery] *what* you cut is the same, *where* you cut is the same. What is different is *how* you cut.”

According to Dr. Markus Hohenfellner at the University of Heidelberg in Germany, robotics play a strong role in training.

“Robotic surgery actually is a great way to introduce young residents to laparoscopy,” he said. “They start as assistant number two and are then upgraded to assistant number one. During this time, they acquire a perfect eye-hand coordination, which is important for conventional laparoscopy.”

Others around the globe echo these sentiments, including Dr. Declan G. Murphy of the Peter MacCallum Cancer Centre in Melbourne, Australia.

“[Robotic surgery] has been a revelation in how we train fellows and residents in complex laparoscopic surgery,” he said. “This is particularly so with the advent of simulators and dual console technology, which we have very much embraced. There has been a paradigm shift in surgical education driven by this technology, and it is most welcome.”

In 2011, the American Urological Association adopted a set of Standard Operating Practices for Urologic Robotic Surgery to help guide institutions as they work to credential urologists for privileges to perform robotic surgery. The guide was developed by the AUA’s Laparoscopic, Robotic and New Surgical Technologies Committee and is available online at www.AUAnet.org.

CONCLUSION

Will robotics replace traditional surgery? As surgeons, we treat diseases and injuries with operative procedures. We do so with tools that allow us to remove and reconnect tissue in the most efficient manner while maintaining respect for surrounding intact tissue and anatomy. Laparoscopy and robotics have not replaced the basic tools of the urologic surgeon; rather, these skills have expanded the breadth of options we have in treating our patients, and we use everything available to us.

It is our ability to be flexible that allows us to be efficient. For, even as robotics may seem to some like the pinnacle of modern surgery, new advancements may be waiting on the horizon to enhance or expand surgical technologies. Medical and technological advances in recent years hold the promise of new discoveries that could expand the surgical toolbox. The rise of the robot may not be an endpoint, but rather a stepping stone to an even brighter future for surgery. ♦



UP CLOSE

& Personal

The AUA's Male Circumcision Volunteer Program

The American Urological Association (AUA), through its Male Circumcision Task Force, is collaborating with major international healthcare agencies to scale up adult male circumcision services in sub-Saharan Africa (SSA) to combat the spread of the acquired immunodeficiency syndrome (AIDS). The magnitude of the AIDS epidemic is enormous, but male circumcision can have a major impact in reducing the extent of this devastating disease. Recent studies have shown that male circumcision is one of the most powerful medical interventions in the fight against the AIDS epidemic in sub-Saharan Africa. The World Health Organization (WHO) has called these studies "compelling" and the efficacy of male circumcision "proven beyond reasonable doubt." WHO has stated that male circumcision should be recognized as one of the key strategies for the prevention of heterosexually acquired HIV infection in men in sub-Saharan Africa.

Chaired by Ira Sharlip, MD, the AUA Male Circumcision Task Force has been created to help fill the shortage of surgical manpower for adult male circumcision in sub-Saharan Africa. The AUA's role in the program is to create a pool of qualified volunteer surgeons and link these volunteers to Ministries of Health in Africa and international health agencies that are in need of surgical manpower. As part of this effort, the AUA provides a training course to potential volunteers during the AUA Annual Meeting. This course is a pre-requisite to volunteer service in the AUA program. The course is designed to educate urologists about the epidemiology of HIV disease and of male circumcision in SSA, and why adult male circumcision is effective for HIV prevention. Participants receive instruction on male circumcision techniques, cultural aspects of life in sub-Saharan Africa and tips on how to be a good volunteer.

Presently, the AUA is collaborating with Jhpiego, a Johns Hopkins University affiliate, which is involved in a male circumcision scale-up program in Swaziland. Swaziland, a small country in



Dr. Zvi Levran and Lindiwe, a surgical nurse from Zimbabwe, take a break from a busy day of surgery to pose for a photo outside the clinic in Swaziland.

sub-Saharan Africa, has the highest prevalence of HIV-AIDS in the world and yet has only one urologist to serve the entire country. Dr. Zvi Levran traveled to Swaziland for two weeks in August 2010 as an AUA volunteer to perform adult male circumcisions. We recently asked him about his experience with the AUA Male Circumcision Program. He was eager to share some interesting insights.

Name: Zvi Levran, MD

Location: Livonia, Michigan

Dates of Trip: August 15 – 28, 2010

Country Visited: Swaziland

Name of Clinic: Litsemu Leftu

AUA: How did you hear about the AUA Male Circumcision Volunteer Program?

Dr. Levran: *It was advertised through the AUA just prior to the AUA meeting in San Francisco in 2010. I was also aware of the project a year prior to that through reading different articles.*

AUA: Why did you want to participate in the program?

Dr. Levran: *I felt that I could donate my time for such an honorable cause.*

AUA: How many male circumcisions did you perform during your time in Swaziland? Did you have assistance during these surgeries?

Dr. Levran: 300 in ten days. I performed the major operation, and the local nurse would place the last stitches.

AUA: Briefly describe an average day at the Litsembe Leftu Clinic.

Dr. Levran: I would arrive around 8:00 a.m. and help set up the operating fields. Then by 8:30 – 9 a.m., we would start the procedures, depending on the attendance. I usually took lunch around 12:30 or 1 p.m., and then restarted the procedures until 6 p.m. or so, once again depending on the quantity of clients.

AUA: What did you find most challenging during your trip?

Dr. Levran: The faster I adjusted to the present condition of the surgical theater as well as the instruments, the more efficient I became. Not many things were challenging because of the help provided by the clinic personnel.

AUA: What moment or experience did you find to be the most impactful?

Dr. Levran: Some of the boys/young men have never seen a doctor in their lives and some had severe penile problems that had to be dealt with. To surgically correct and repair these clients was the most gratifying moment.



Dr. Zvi Levran takes a photo with two boys after their circumcision surgery.

AUA: Was your experience in Swaziland different than what you expected?

Dr. Levran: It was a wonderful experience with wonderful people. I never expected to feel at home in such a short period of time.

AUA: Would you recommend participation in this program to your colleagues? If so, why?

Dr. Levran: I would highly recommend participation in this program to all of my colleagues who are willing to donate their time to help the people of Africa. I would also like to continue to be active in this important project. ♦

For more information about the AUA's Male Circumcision Volunteer Program, e-mail Ellen Molino at emolino@auanet.org.

The outside of the Litsembe Leftu Clinic in Swaziland.





Urologic Reconstruction - More Education Is Needed Worldwide

By Allen F. Morey, MD, and Iori Agbonkhese

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Globalization has resulted in increased communication and networking in all areas of healthcare. The American Urological Association (AUA) has been seeing an increase in the requests for scientific talks, training and information on urologic reconstruction from around the globe and set out to determine the cause for this increased interest. We found two key areas that have prompted an increased focus on reconstructive urology: urethral stricture and vesicovaginal fistula.

STRICTURES – A COMMON PROBLEM

Urethral stricture is one of the most common problems requiring urologic reconstruction. Strictures – a blockage in the urethra that can cause frequent urination, slow urine stream and/or infections – are commonly found in patients who have sustained pelvic fracture via urethral disruption injuries. Inflammatory strictures of the anterior urethra are also very common worldwide, and many are related to prior urologic instrumentation, straddle or gunshot injuries; idiopathic fibrotic conditions such as balanitis xerotica obliterans (lichen sclerosus); or hypospadias surgeries.

In many areas around the world, road traffic injuries are a major cause of trauma-related strictures. According to the World Health Organization (WHO), road traffic injuries are a leading cause of death, killing nearly 1.3 million people each year¹. Between 20 and 50 million people sustain non-fatal injuries. Only 15 percent of countries have comprehensive legislation on the major risk factors to road safety leaving children, pedestri-

ans, cyclists and the elderly among the most vulnerable of road users. Developing countries often do not have the infrastructure in place for pedestrian traffic (e.g., sidewalks and crosswalks), which results in motor vehicle and pedestrian accidents being commonplace. Victims of these types of accidents often present with pelvic fracture traumas and urethral disruptions. Dr. Gedson Evaristo de Santi from Londrina, Paraná, in Brazil echoes these findings and indicates that “the most common urologic reconstructive injuries he sees are bulbar strictures, followed by penile and navicularis strictures - most of them result from traffic accidents, urethritis and some iatrogenic cases.”

According to Dr. Sanjay Kulkarni of Pune, India, posterior urethral injuries and ureterovaginal and vesicovaginal fistulae are the most common urologic reconstructive injuries in India, with urethroplasty being the most common procedure. Although reconstructive urology is not a formal training topic in Indian residency programs, Dr. Kulkarni says “urethroplasties are commonly performed by all units. India has 1 percent of all the vehicles in the world, but the accident rate is 6 percent. With a population of 1.2 billion and only 2,000 urologists, every urologist performs urethroplasty. There are only a few urologists dedicated to reconstructive urethral surgery.”

We spoke to Dr. Richard Santucci, Chief of Urology at Detroit Receiving Hospital, regarding the most common reconstructive problems he has encountered during his many volunteer missions, and he reported that “pelvic fracture urethral distraction defects (PFUDDs) were very common, but the average time the person has been walking around with a suprapubic tube is five years. Next [most common problem] is severe, often previously operated, inflammatory stricture. Left untreated, strictures can



Traffic in Mysore, Karnataka, India: Injuries resulting from traffic accidents account for many urethroplasty procedures in India.

lead to the total incapacity to urinate, bladder stones, gangrenous infection and fistula; and although they are typically encountered as a result of pelvic injuries, strictures may also present after prostate surgery, removal of kidney stones, or urinary catheterization.

Even as road traffic injuries remain an important public health problem around the globe, so does a general need for more urologists to become familiar with urologic reconstruction procedures. According to Dr. Allen F. Morey, Professor of Urology at the University of Texas Southwestern (UTSW) who serves as Secretary-Treasurer of the Society of Genitourinary Reconstructive Surgeons (GURS), the past 10 years has seen a profound increase in the number of fellowship training positions available nationally in the United States. Recognizing that this is an area in need of additional training, education, and advocacy, the AUA has developed a Urinary Reconstruction Task Force to help shed light on some of the issues and concerns in urologic reconstruction. The Task Force is comprised of experts in both male and female urologic reconstruction, as well as leaders from urologic sub-specialty organizations such as GURS and Society of Female Urology and Urodynamics (SUFU).

TRANSFORMING LIVES AFTER FISTULA

Another prevalent area of reconstructive urology in developing countries is treating women who suffer from pelvic floor injuries and incontinence. Vesicovaginal fistula (VVF) is often the result of prolonged or obstructed labor, which leaves the woman with an internal tearing between the vagina and bladder. Without surgical intervention, many women in developing countries suf-

fer in silence and isolation, and face permanent incontinence. Women suffering from this devastating injury are often divorced by their husbands, shunned by their communities and blamed for their medical condition.

The true prevalence rate of VVF in developing countries is unknown, and although VVF is a global health problem, fistulas appear to be common in sub-Saharan Africa. In 2002, the United Nations Population Fund (UNFPA) and Engender Health conducted a six-month needs assessment in nine African countries, and estimated that there could be up to 1 million women living with fistulas in Nigeria alone². Dr. Leslie E. Akporiaye of Port Harcourt, River State, Nigeria says that "some of the challenges associated with treating patients in Nigeria are the financial costs, post-operative care and appropriate materials for repair." However, Dr. Akporiaye also indicated "there is a current federal government initiative to treat patients suffering from VVF in Nigeria."

Many AUA members have conducted volunteer missions to countries in sub-Saharan Africa to perform reconstructive urology procedures, including VVF. Dr. Morey has participated in volunteer missions to Honduras annually for the past 14 years, and the GURS is also planning future missions to Haiti and Brazil.

Dr. Santucci says that he started volunteering [in developing countries] at surgical centers on his own. "I've operated in Brazil, four hospitals in South Africa, India, and Chile." He has recently taken the approach of trying to train others by setting up surgical teams under the IUmed umbrella with the goal of direct hands-on teaching. He plans to participate in upcoming IUmed missions in sub-Saharan Africa as well.

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THE FUTURE – RESEARCH, EDUCATION AND COLLABORATION

What is ahead for the specialty of urologic reconstruction? According to Dr. Morey, advances are being made in tissue engineering, which will be important in the future. In a report by the U.S. Department of Health and Human Services, regenerative medicine is called the “next evolution of medical treatments.” The report, “2020: A New Vision – A Future for Regenerative Medicine,” says the field not only “holds the realistic promise of regenerating damaged tissues and organs in the living body,” but “empowers scientists to grow tissues and organs in the laboratory and safely implant them.” Dr. Anthony J. Atala, Chair of Urology and Director of the Wake Forest Institute for Regenerative Medicine, and his interdisciplinary team were among the first in the world to engineer laboratory-grown organs that were successfully implanted into humans. According to Dr. Atala, “We have many challenges to meet, but are optimistic about the ability of the field to have a significant impact on human health. We believe regenerative medicine promises to be one of the most pervasive influences on public health in the modern era.”

Dr. Leopoldo A. Ribeiro-Filho of Sao Paulo, Brazil, has also been conducting promising research. The concept for organ-specific, tissue-engineered acellular matrix was developed by urologists at the University of California, San Francisco, where Dr. Ribeiro-Filho was a urology fellow working with Drs. Emil Tanagho and Rajvir Dahiya³. After receiving an R01 NIH grant, Dr. Ribeiro-Filho returned to Brazil and established a tissue-engineering lab, where he continued his studies and modification of the surgical technique. Since that time, he has been performing urethroplasty using a tissue-engineered urethral acellular matrix graft (UAMG).

Although advancements in research will undoubtedly change the practice of reconstructive urology, the immediate need for increased education, training and collaboration is a reality. Dr. Anthony R. Mundy, GURS President, echoes these findings and commented that “the most important [future for urologic reconstruction] would be increased training and education.”

With only 110 urologists in Nigeria, “all urologists have to do some type of reconstructive work or other,” says Dr. Akporiaye, who feels that the future of urologic reconstruction in Nigeria will be “research, training and education.” Nigeria is not alone in the disparity between the population and the number of trained

reconstructive urologists. According to Dr. Santucci, “Even in the U.S., there are areas where no one for hundreds of miles performs urethroplasty. Globally, it can be much worse. One astonishing example is Mozambique: 20 million people and only one urologist.”

The AUA has long recognized that the interchange of urological skills, expertise and knowledge is critical to the continued success of urology in the world community, and has established a variety of programs to provide outstanding and promising junior faculty with an opportunity to interact with and learn from colleagues abroad. As the 2010 AUA/Sociedade Brasileira de Urologia (SBU) Academic Exchange Program Scholar, Dr. de Santi conducted his exchange experience at UTSW. He says, “I learned some new surgical techniques and valuable personal tips at UTSW that made the difference.” Since returning to Brazil, Dr. de Santi has incorporated the knowledge gained as a result of the exchange into his daily practice. He says, “I have been invited to perform some reconstructive surgeries at the State University here and to share some experience with other colleagues beginning to have an interest in reconstruction. Many other colleagues are sending me some of their patients when reconstructive surgery is needed.”

Dr. de Santi’s experience is an excellent example of the effectiveness of collaborations and knowledge-sharing that will continue to improve the quality of urologic care around the world. According to Dr. de Santi, “My scholar exchange in 2010 at the UTSW in Dallas with Professor Morey completely changed my career for a higher level.” ♦

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Standardizing Urology Residency Training in China

Robert C. Flanigan, MD

As urologists, concern for our patients and the pursuit of promising new treatments is universal. These core values are embedded in the deep history of medicine and transcend geographic, cultural and language barriers. During the last few decades, advances in technology have promoted the international exchange of research, ideas and perspectives on patient care making the ever-expanding world of medicine smaller. The AUA has long recognized the value of involvement in the international urological community, and has taken a leading role in international information exchange.

Although the AUA and the Chinese Urological Association (CUA) have a long history of friendship and collaboration, our two organizations began formal collaborations several years ago on a number of educational initiatives, including the AUA/CUA academic exchange and residents programs, as well as a CUA/AUA Summit held during the CUA's Annual Meeting, the CUA Annual Meeting attracts more than 3,000 urologists from all across China each year.

As the CUA prepares to commemorate its 30th anniversary, I am pleased to announce that the friendship and partnership with the CUA has grown significantly and that both organizations will celebrate the inaugural session of a three-year CUA/AUA Joint Urology Residency Training Program in October 2011. Currently, urology residency training throughout China is not standardized, and urologists are often limited to practicing in the areas where they receive training because hospitals in different cities may have different standards to define what is considered to be a urologist. The CUA/AUA Joint Urology Residency Training Program will seek to standardize urology residency training throughout the country. According to Dr. Yanqun Na, CUA Immediate Past President, "The clinical demand for urology in China is increasing with China's sustained economic growth and rapid transition into an aging society. Each year, about 1,000 new doctors begin their urology practices. However, some of them have only received three years of residency training in general surgery without standard urology residency training. Therefore, the clinical skills of these urologists and their abilities to practice is uneven, which has seriously hampered the healthy development of China's urology."

The CUA has identified 60 residency programs as CUA/AUA urology residency training bases throughout China based upon their size, faculty, equipment, patient load, surgical volumes, etc. From these programs, the CUA will select 40 residents each year to enter a two-year CUA/AUA Joint Urology Residency Training Program. Candidates will have finished their general surgery training and be ready to start urology residency. The goal of the program is to train 80 Chinese urology residents by the completion of two terms of the training program. The

program will feature two educational sessions each year to be held at the Wujieping Urology Medical Center in Beijing. Each session will cover multiple urologic topics and feature the AUA's Urology Core Curriculum, with an examination process built into the training schedule to evaluate the residents' knowledge base. Participants will be required to learn both CUA and AUA Clinical Guidelines, which are featured in the joint training module. Trainees will also receive urological laparoscopic simulation training at the Wujieping Center. In the second academic year, the participants will be trained in their hospitals, where they will serve as chief residents for at least six months. According to Dr. Gopal Badlani, AUA Secretary, "The CUA/AUA Joint Urology Residency Training Program and educational bridge activities fulfill a training and educational need in Chinese urology and fosters the interchange of urological skills, expertise and knowledge, which is critical to the continued success of urology in the world community."

"Several people deserve special mention for fostering this close relationship between the AUA and CUA, namely Dr. Robert Flanigan, the current AUA International Educational Consultant, Dr. Yanqun Na, CUA Immediate Past President, and Dr. Min Zhang, AUA Host Country Liaison, who has been invaluable with his diplomacy," says AUA President Dr. Sushil Lacy. In recognition of his efforts to standardize urologic education throughout China, the AUA awarded Dr. Na with AUA Honorary membership during the 2011 AUA Annual Meeting in Washington, DC. The AUA values its close relationship with the CUA and looks forward to continuing its collaborations with the CUA leadership in the future.

As the field of urology in China continues to expand, the CUA/AUA partnership will directly impact the educational opportunities for trainees and urologists while improving the quality and delivery of care to patients. Look for future issues of Global Connections for more information about the AUA's activities in China, as well as other countries around the world. ♦



Leaders of the CUA & AUA met in Xi'an, China during the 2010 CUA Annual Meeting.

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